

# BRFSS Brief

Number 1202

The Behavioral Risk Factor Surveillance System (BRFSS) is an annual statewide telephone survey of adults developed by the Centers for Disease Control and Prevention and administered by the New York State Department of Health. The BRFSS is designed to provide information on behaviors, risk factors, and utilization of preventive services related to the leading causes of chronic and infectious diseases, disability, injury, and death among the noninstitutionalized, civilian population aged 18 years and older.

## Fruit and Vegetable Consumption

New York State Adults 2009

### Introduction and Key Findings

Consuming a diet rich in fruits and vegetables every day is an important part of a healthy lifestyle. Fruits and vegetables are excellent sources of essential vitamins, minerals and fiber. Substituting fruits and vegetables for higher calorie foods can contribute to weight management and help reduce the risk of stroke, high blood pressure, diabetes, and some cancers.<sup>1,2,3</sup>

For the past two decades, the National Cancer Institute (NCI) and the Produce for Better Health Foundation have promoted consuming five or more servings of fruits and vegetables a day for improved health. In 2007, the 5 A Day program became the National Fruit and Vegetable Program and a new public health initiative, Fruits & Veggies—More Matters<sup>4</sup>, was launched in order to reflect new dietary guidelines. Healthy People 2010 established objectives to increase the percentage of adults eating two or more servings of fruit daily to 75% and the percent of adults consuming three or more servings of vegetables to 50%.<sup>5</sup> In New York State, the Prevention Agenda Toward the Healthiest State established a goal to increase the percentage of adult New Yorkers who consume fruits and vegetables five or more times per day to at least 33%.<sup>6</sup>

Between 2000 and 2009, the percentages of adults in New York State consuming five or more fruits or vegetables per day, two or more fruits per day, and three or more vegetables per day have all remained relatively constant. In 2009, daily fruit and vegetable consumption among New York adults did not meet the state and national standards with only 27% of adult New Yorkers consuming five or more fruits or vegetables, 24.8% consuming three or more vegetables and 38.9% consuming two or more fruits daily.

### BRFSS Questions

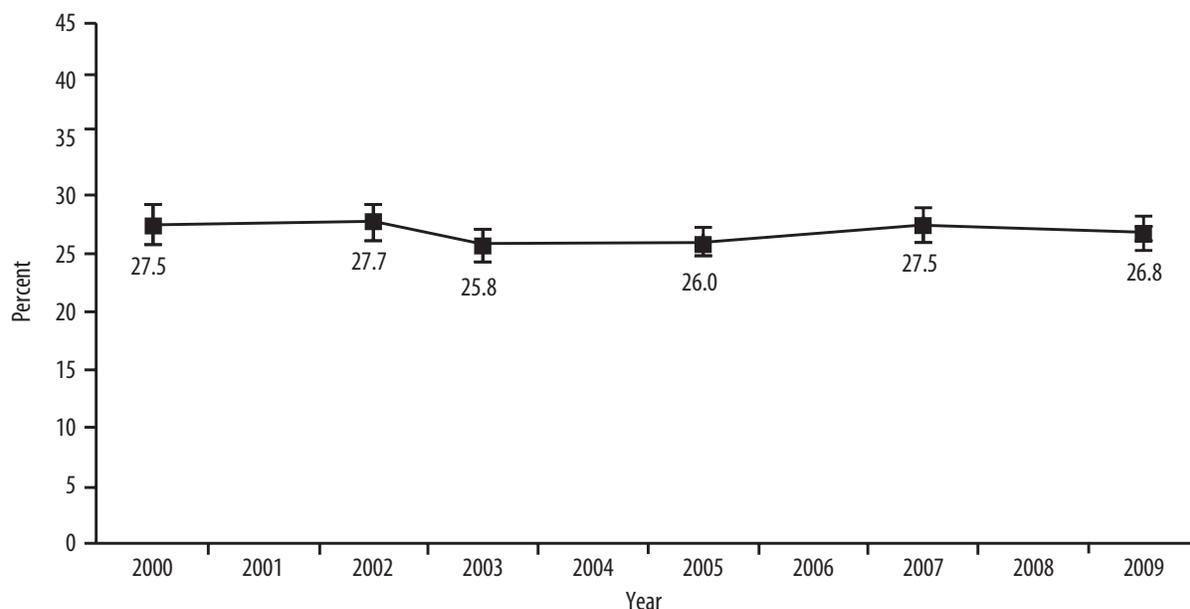
These next questions are about the foods you usually eat or drink. Please tell me how often you eat or drink each one, for example, twice a week, three times a month, and so forth. Remember, I am only interested in the foods you eat. Include all foods you eat, both at home and away from home.

1. *How often do you drink fruit juices such as orange, grapefruit, or tomato?*
2. *Not counting juice, how often do you eat fruit?*

3. *How often do you eat green salad?*
4. *How often do you eat potatoes not including French fries, fried potatoes, or potato chips?*
5. *How often do you eat carrots?*
6. *Not counting carrots, potatoes, or salad, how many servings of vegetables do you usually eat?*

Responses to the six questions were combined to create a composite measure of average daily fruit and vegetable consumption.

## Percentage of adults in New York State consuming fruits and vegetables five or more times per day, by BRFSS survey year

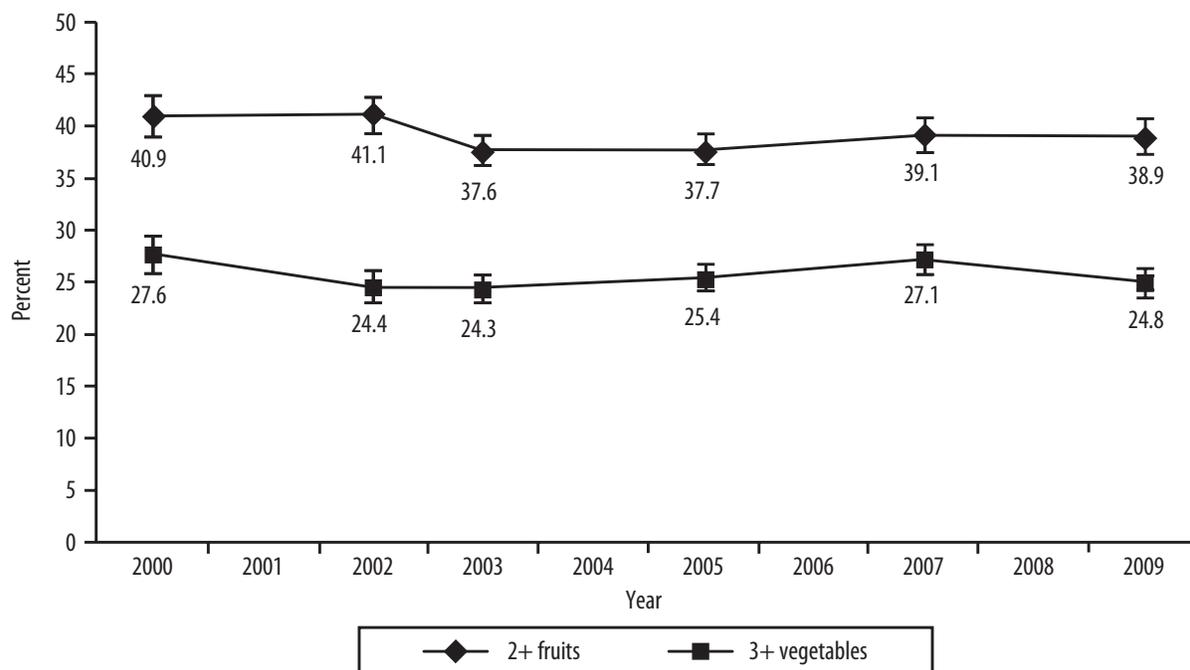


Note: The New York State Prevention Agenda established an objective to increase the percentage of adult New Yorkers who consume fruits and vegetables five or more times per day to at least 33%.

Note: Error bars represent 95% confidence intervals.

Note: Data on fruit and vegetable consumption not collected in 2001, 2004, 2006, or 2008 New York State BRFSS.

## Percentages of adults in New York State consuming fruits two or more times per day and vegetables three or more times per day, by BRFSS survey year



Note: Error bars represent 95% confidence intervals.

Note: Data on fruit and vegetable consumption not collected in 2001, 2004, 2006, or 2008 New York BRFSS.

## Fruit and vegetable consumption among New York State adults: 2009 BRFSS

	Daily fruit and vegetable consumption							
	Fruit (2 or more)		Vegetable (3 or more)		Fruit (2 or more) and vegetable (3 or more)		Fruit and vegetable (5 or more)	
	% <sup>a</sup>	95% CI <sup>a</sup>	%	95% CI	%	95% CI	%	95% CI
<b>New York State</b> (NYS) [n=6,927]	38.9	37.2-40.7	24.8	23.4-26.3	14.8	13.6-16.0	26.8	25.3-28.3
<b>Sex</b>								
Male	34.8	32.1-37.6	20.5	18.4-22.9	11.8	10.0-13.8	22.8	20.4-25.3
Female	42.7	40.6-44.8	28.7	26.9-30.6	17.5	16.1-19.0	30.4	28.6-32.4
<b>Age</b>								
18-24	39.2	32.3-46.6	16.4*	11.7-22.5	10.1*	6.4-15.5	20.4*	15.2-26.8
25-34	37.5	32.7-42.6	22.2	18.5-26.4	13.2	10.3-16.6	26.1	21.9-30.8
35-44	34.9	31.1-38.9	26.0	22.7-29.7	14.5	11.9-17.6	26.3	22.9-30.0
45-54	36.5	33.3-39.8	27.4	24.6-30.4	14.7	12.6-17.0	28.7	25.8-31.8
55-64	36.7	33.4-40.2	28.3	25.4-31.5	15.7	13.4-18.3	26.9	23.8-30.1
>65	48.1	45.3-50.9	26.1	23.8-28.6	18.8	16.7-21.0	30.1	27.6-32.7
<b>Race/ethnicity</b>								
White, non-Hispanic	38.2	36.4-40.0	26.7	25.2-28.3	16.1	14.8-17.4	26.9	25.4-28.5
Black, non-Hispanic	37.9	32.5-43.6	20.6	16.3-25.6	11.7	8.4-15.9	25.5	20.9-30.7
Hispanic	38.1	32.8-43.7	17.7	14.1-22.0	10.0	7.3-13.4	21.9	17.9-26.6
Other, non-Hispanic	45.0	37.5-52.7	29.9	23.5-37.2	17.5	12.7-23.8	33.9	27.2-41.4
<b>Annual household income</b>								
<\$15,000	30.6	25.1-36.7	18.2	14.0-23.4	10.7	7.6-14.9	22.3	17.6-27.9
\$15,000-\$24,999	39.5	34.8-44.3	21.6	18.2-25.6	12.5	9.9-15.6	24.5	20.6-28.7
\$25,000-\$34,999	38.3	32.8-44.1	20.7	16.6-25.4	12.5	9.5-16.3	24.3	19.9-29.4
\$35,000-\$49,999	37.1	32.6-42.0	24.3	20.7-28.4	15.2	12.3-18.7	25.1	21.3-29.3
>\$50,000	40.2	37.7-42.8	28.4	26.2-30.7	16.1	14.5-18.0	29.9	27.6-32.3
Missing <sup>b</sup>	41.5	36.5-46.8	23.7	19.6-28.3	16.0	12.5-20.4	25.2	21.1-29.8
<b>Education</b>								
Less than high school	31.8	25.7-38.6	17.1	12.3-23.3	10.4*	6.5-16.1	20.7	15.5-27.2
High school or GED	37.8	34.5-41.2	18.7	16.3-21.3	10.8	9.0-13.0	22.4	19.8-25.3
Some post high school	35.7	32.3-39.3	24.1	21.3-27.1	12.7	10.7-15.0	25.8	22.8-29.1
College graduate	43.6	41.0-46.2	31.4	29.2-33.8	19.9	18.0-21.9	32.1	29.7-34.5
<b>Weight status categories</b>								
Obese	33.5	30.4-36.8	25.0	22.1-28.1	12.7	10.7-14.9	24.1	21.3-27.2
Overweight	37.1	34.3-39.9	23.4	21.3-25.8	13.8	12.1-15.7	25.7	23.3-28.2
Neither obese nor overweight	44.1	41.1-47.2	25.6	23.2-28.1	16.9	14.9-19.2	29.6	27.0-32.4
<b>Region</b>								
New York City (NYC)	40.4	37.0-43.8	20.5	18.0-23.3	12.8	10.8-15.1	25.2	22.4-28.3
NYS exclusive of NYC	38.2	36.3-40.2	27.0	25.3-28.7	15.7	14.4-17.2	27.6	25.8-29.4

a % = weighted percentage; CI = confidence interval

b ""Missing"" category included because more than 10% of the sample did not report income.

\* Estimate is based on fewer than 50 observations.

## References

1. U.S. Department of Health and Human Services and U.S. Department of Agriculture. Dietary Guidelines for Americans, 2005. 6th Edition, Washington, DC: U.S. Government Printing Office, January 2005.
2. IARC Handbooks of Cancer Prevention. In: Fruits and vegetables. vol. 8:Lyon, France: IARC Press; 2003.
3. Hung HC, Joshipura KJ, Jiang R, et al. Fruit and vegetable intake and risk of major chronic disease. *J Natl Cancer Inst.* 2004;96:1577–1584.
4. National Fruit and Vegetable Program. "Fruits & Veggies—More Matters." Available at: <http://www.fruitsandveggiesmatter.gov> and <http://www.fruitsandveggiesmorematters.org>
5. CDC. State indicator report on fruit and vegetables, 2009. US Department of Health and Human Services, CDC; 2009. Available at: <http://www.fruitsandveggiesmatter.gov/indicatorreport> Accessed May 17, 2011.
6. New York State Department of Health. Prevention Agenda Toward the Healthiest State 2008-2013. Available at: [http://www.health.ny.gov/prevention/prevention\\_agenda/](http://www.health.ny.gov/prevention/prevention_agenda/) Accessed May 17, 2011.

## Program Contributions

New York State Department of Health  
Bureau of Chronic Disease Evaluation and Research  
Bureau of Chronic Disease Control

## Order Information

### Copies may be obtained by contacting:

BRFSS Coordinator  
New York State Department of Health  
Bureau of Chronic Disease Evaluation and Research  
Empire State Plaza, Rm. 565  
Corning Tower  
Albany, NY 12237-0679

### Or by phone or electronic mail:

(518) 473-0673  
or  
[BRFSS@health.state.ny.us](mailto:BRFSS@health.state.ny.us)  
or  
[www.health.ny.gov](http://www.health.ny.gov)